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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/536,986	03/17/2006	Hideyuki Nishio	1600-0161PUS1	6269

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EXAMINER	
HEINCER, LIAM J	

ART UNIT	PAPER NUMBER
1709	

NOTIFICATION DATE	DELIVERY MODE
09/21/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/536,986	NISHIO ET AL.	
	Examiner	Art Unit	
	Liam J. Heincer	1709	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 10-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 10-12* is/are rejected.

7)☒ Claim(s) *5* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/2005 and 8/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 5 is objected to because of the following informalities: there is a typo in claim 5 such that it reads "characterized by obtainable" rather than "characterized by being obtainable". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, and 4 are rejected under 35 U.S.C. 102(a) as being anticipated by Nishio et al. (WO 03/002669). Note: US Publication 2004/0166417 is being used as an English equivalent for WO 03/002669 and all references will be directed towards the US document.
Considering Claims 1 and 2: Nishio et al. teaches a process for producing a polyether polymer composition (¶0010) wherein an antioxidant solution (¶0104) is incorporated into a polymer slurry (¶0104) comprising an organic solvent (¶0104) and a polyether polymer (¶0104) dispersed therein; and then removing the organic solvent from the slurry (¶0104).
Considering Claim 4: Nishio et al. teaches the organic solvent as being n-hexane (¶0104).

Claims 5 and 11 are rejected under 35 U.S.C. 102(a) as being anticipated by Nishio et al. (WO 03/002669).
Considering Claim 5: Nishio et al. teaches a polyether polymer composition (¶0010) produced by incorporating an antioxidant solution (¶0104) into a polymer slurry (¶0104) comprising an organic solvent (¶0104) and a polyether polymer (¶0104) dispersed therein; and then removing the organic solvent from the slurry (¶0104).

Considering Claim 11: Nishio et al. teaches making a solid electrolyte film (¶0010) comprising the polyether composition (¶0010) and an electrolyte salt compound which is soluble in the polyether polymer composition (¶0016).

Claims 6, 7, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Meier et al. (US Pat 6,028,131).

Considering Claim 6: Meier et al. teaches a polyether composition comprising a polyether polymer particle (5:54-6:12), and a stabilizer (1:4-7), wherein the composition is characterized as having a gel content of not larger than 5% by weight (23:40-48) and by at least 50% by weight of the total amount of the stabilizer in the composition exists within the polyether polymer particle (3:34-39).

Considering Claim 7: Claim 7 is a product by process claim and there being nothing of record that shows that the process will produce a materially different product, the product is considered as being materially the same as above.

Considering Claim 10: Meier et al. teaches the stabilizer as being a hindered phenol compound (Formula I).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the

time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al. (US Pat. 5,968,681) in view of Lascaud et al. (WO 01/084659). Note: US Publication US 2003/0108799 is being used as an English language equivalent of WO 01/084659 and all references will be directed towards the US document.

Considering Claim 1: Miura et al. teaches a process for producing a polyether polymer composition (1:5-10) comprising forming a slurry comprising an organic solvent and a polyether polymer dispersed therein (17:64-18:6); and removing the organic solvent from the slurry (18:7-10).

Miura et al. does not teach adding an antioxidant to the slurry. However, Lascaud et al. teaches adding a hindered amine antioxidant to a polyether composition (¶0054). Miura et al. and Lascaud et al. are combinable as they are concerned with the same field of endeavor, namely polyether compositions. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have added an antioxidant to the composition of Miura et al. as in Lascaud et al., and the motivation to do so would have been, as Lascaud et al. suggests, to control tree forming (¶0042).

Considering Claim 4: Miura et al. teaches the organic solvent as being n-hexane (18:2).

Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al. (US Pat. 5,968,681) in view of Lascaud et al. (WO 01/084659).

Considering Claim 5: Miura et al. teaches polyether polymer composition (1:5-10) obtainable through a process comprising forming a slurry comprising an organic solvent and a polyether polymer dispersed therein (17:64-18:6); and removing the organic solvent from the slurry (18:7-10).

Miura et al. does not teach an antioxidant as being in the slurry. However, Lascaud et al. teaches adding a hindered amine antioxidant to a polyether composition (¶0054). Miura et al. and Lascaud et al. are combinable as they are concerned with the same field of endeavor, namely polyether compositions. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have added an antioxidant to the composition of Miura

et al. as in Lascaud et al., and the motivation to do so would have been, as Lascaud et al. suggests, to control tree forming (¶0042).

Considering Claim 11: Miura et al. teaches making a solid electrolyte (1:56-57) comprising the polyether composition (2:56-57) and an electrolyte salt compound which is soluble in the polyether polymer composition (2:58-59).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al. (US Pat. 5,968,681) in view of Lascaud et al. (WO 01/084659) as applied to claim 1 above, and further in view of Bhatia et al. (JP 08-188653).

Considering Claim 2: Miura et al. and Lascaud et al. collectively teach the method of claim 1.

Miura et al. does not teach the additive as being in solution. However, Bhatia et al. teaches adding additives in solution to synthetic polymers (PAJ Abstract). Miura et al. and Bhatia et al. et al. are combinable as they are concerned with the same field of endeavor, namely synthetic polymers. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have added the additive in solution in the process of Miura et al. as in Bhatia et al., and the motivation to do so would have been, as Bhatia et al. suggests, to highly disperse the additive (PAJ Abstract).

Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al. (US Pat. 5,968,681) in view of Meier et al. (US Pat 6,028,131).

Considering Claims 6 and 12: Miura et al. teaches making a solid electrolyte (1:56-57) comprising the polyether composition (2:56-57) and an electrolyte salt compound which is soluble in the polyether polymer composition (2:58-59).

Miura et al. does not teach the polyether composition as having the properties of claim 6. However, Meier et al. teaches a polyether composition comprising a polyether polymer particle (5:54-6:12), and a stabilizer (1:4-7), wherein the composition is characterized as having a gel content of not larger than 5% by weight (23:40-48) and by at least 50% by weight of the total amount of the stabilizer in the composition exists within the polyether polymer particle (3:34-39). Miura et al. and Meier et al. are combinable as they are concerned with the same field of endeavor, namely polyethers. It would have been obvious

to a person having ordinary skill in the art at the time of the invention to have used the composition of Meier et al. in the electrolyte of Miura et al., and the motivation to do so would have been, as Meier et al. suggests, the composition has less diffusion (1:16-18).

Claims 1, 3, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al. (US Pat. 5,968,681) in view of Takeda et al. (US Pat. 5,658,687).
Considering Claims 1 and 3: Miura et al. teaches a process for producing a polyether polymer composition (1:5-10) comprising forming a slurry comprising an organic solvent and a polyether polymer dispersed therein (17:64-18:6); and removing the organic solvent from the slurry (18:7-10).

Miura et al. does not teach adding a stabilizer to the slurry. However, Takeda et al. teaches adding a hindered phenol stabilizer (6:49-7:20) to a polyether composition (3:44-49). Miura et al. and Takeda et al. are combinable as they are concerned with the same field of endeavor, namely electrolytes. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have added a stabilizer in the method of Miura et al. as in Takeda et al., and the motivation to do so would have been, as Takeda et al. suggests, to prevent free polymerization of the polyether (7:59-65).
Considering Claim 4: Miura et al. teaches the organic solvent as being n-hexane (18:2).

Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al. (US Pat. 5,968,681) in view of Takeda et al. (US Pat. 5,658,687).
Considering Claims 5 and 8: Miura et al. teaches polyether polymer composition (1:5-10) obtainable through a process comprising forming a slurry comprising an organic solvent and a polyether polymer dispersed therein (17:64-18:6); and removing the organic solvent from the slurry (18:7-10).

Miura et al. does not teach a stabilizer as being in the slurry. However, Takeda et al. teaches adding a hindered phenol stabilizer (6:49-7:20) to a polyether composition (3:44-49). Miura et al. and Takeda et al. are combinable as they are concerned with the same field of endeavor, namely electrolytes. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have added a stabilizer into the slurry of Miura et al.

as in Takeda et al., and the motivation to do so would have been, as Takeda et al. suggests, to prevent free polymerization of the polyether (7:59-65).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO form 892.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Liam J. Heincer whose telephone number is 571-270-3297. The examiner can normally be reached on Monday thru Friday 7:30 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LJH

September 6, 2007

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SUPERVISORY PATENT EXAMINER
14/Sep/07